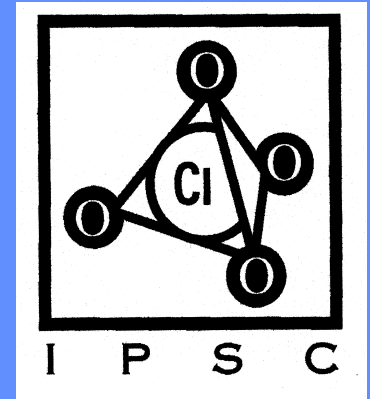
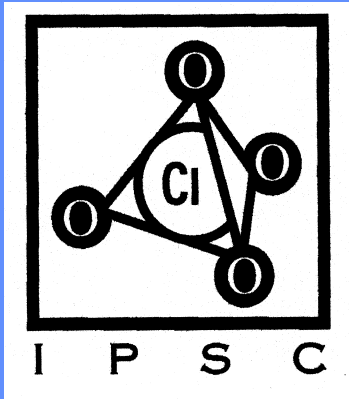


Inter-Agency Perchlorate Steering Committee Stakeholder Forum

Overview and History

19-21 May, 1998

Henderson, Nevada



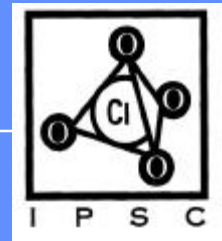
INFORMATIONAL BRIEFING

Lieutenant Colonel Dan Rogers, AFMC LO/JAV

Overview

- Purpose
- Historical Information and Events
- IPSC Composition and Focus
- Forum Composition and Focus
- Where we are and Where we are going

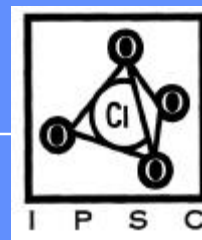
Inter-Agency Perchlorate Steering Committee



Purpose of the Forum

- Gather together the leading experts currently working on the perchlorate issue
- Provide the public with real-time information on perchlorate projects
- Listen to public concerns

Inter-Agency Perchlorate Steering Committee

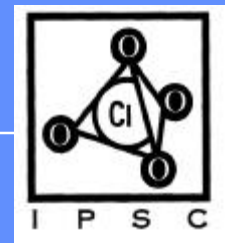


Historical Events and Chronology

(before October 1996, I couldn't spell perchlorate)

- What is Perchlorate?
- Initial Objective!
- 27 Oct 96 Cleanup and Abatement Order
- Method Detection Capability
- TERA Peer Review
- State Regulatory Partnering
- 20/21 May - Protocol Meeting and Funding
- Inter Agency Perchlorate Steering Committee

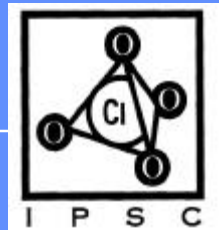
Inter-Agency Perchlorate Steering Committee



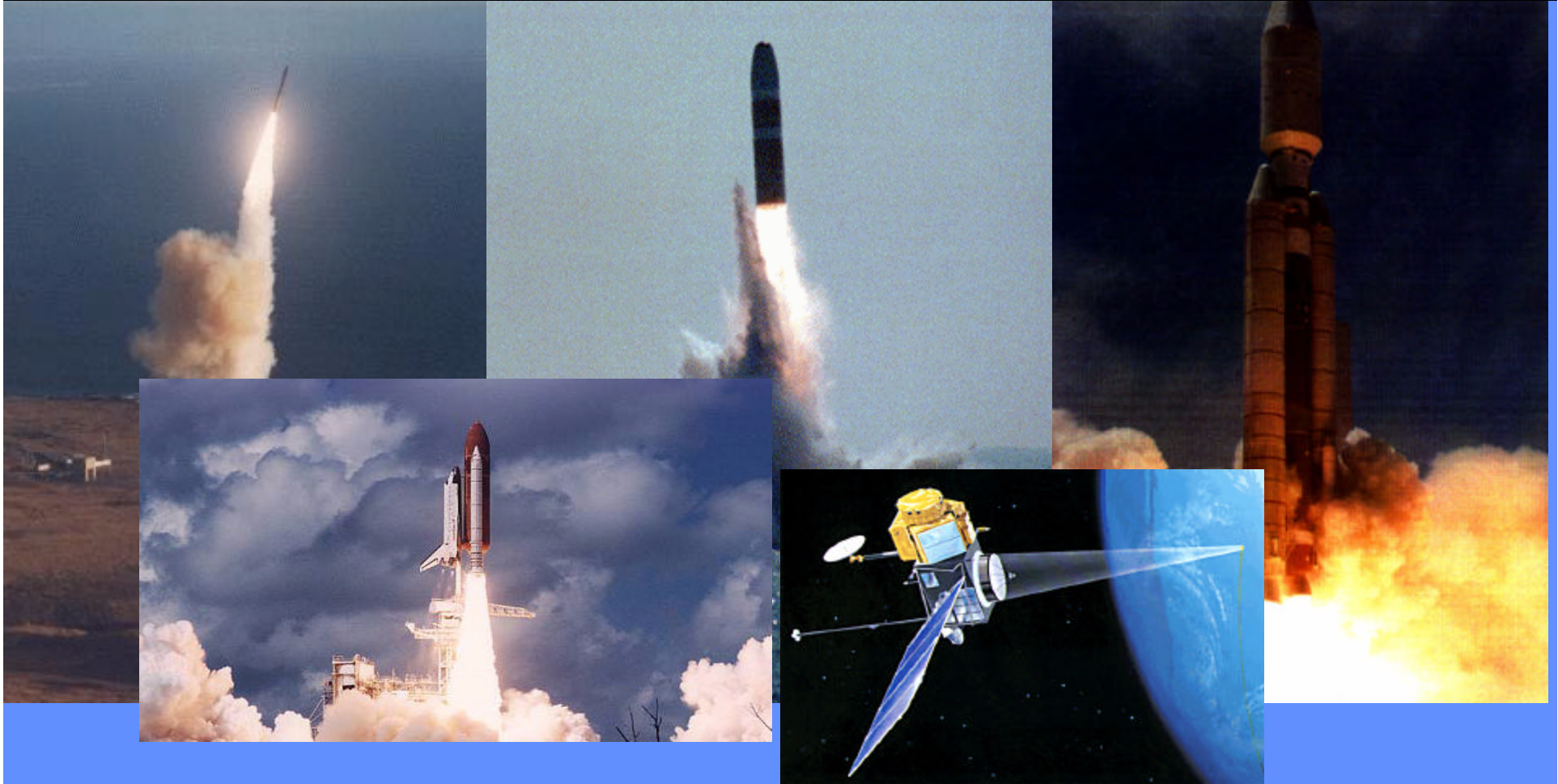
What is Perchlorate?

- **Primary Oxidizer in Solid Rockets**
 - Titan, Minuteman, Peacekeeper, Hawk, Polaris, Space Shuttle
 - Army, Navy, Air Force, NASA
- **Neither Sinker Nor Floater**
- **Very Stable in Water**

Inter-Agency Perchlorate Steering Committee



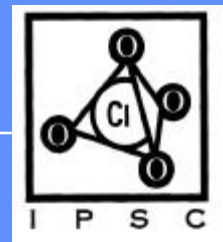
Ammonium Perchlorate - A National Technical Asset Integral to Strategic Defense and Space Systems



Initial Objectives

- Evaluate and Understand Potential Health Risks Associated with Perchlorate in the Environment
- To Get the Best Scientific Information on the Toxicology of Perchlorate for Use by the Decision Makers and Most Importantly to the Public
- Partner with All Stakeholders
 - DoD, Industry, Research & Regulatory Community

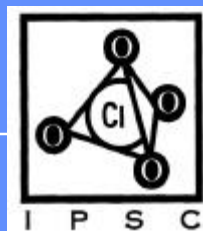
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Integrated Approach

- Analytical
- Health Effects
- Treatment Technology
- Ecological

Inter-Agency Perchlorate Steering Committee

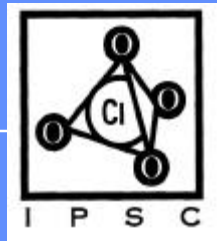


October 96

Central Valley Regional Water Quality Board

- Cleanup and Abatement Order
- Emphasis on Observation of Plume Movement and Detection (MDL 400 ppb)
- Time-line for Cleanup of Groundwater
- Treatment Technology
 - Aerobic Pilot Project
 - Tyndall CRADA

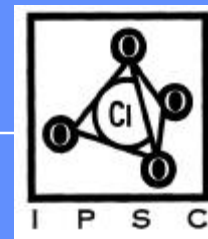
Inter-Agency Perchlorate Steering Committee



Analytical Method Detection Limit (or how low can you go??)

- Pre Jan 97.....400 ppb (Aerojet)
- January 97100 ppb (Aerojet)
- April 97 4 ppb (DHS)
 - now replicated by CVRWQB, Aerojet and others
- Validation on both Aerojet and DHS Protocols by AF is Complete
- 1992/5 EPA “proposed” guidance level (4-18 ppb) based on provisional RfD

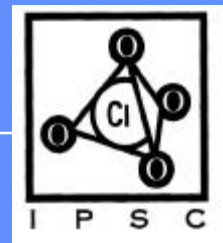
Inter-Agency Perchlorate Steering Committee



March 97 Peer Review

- Convened by TERA, Sponsored by PSG
- Overall Recommendations
 - Data insufficient
 - Solid base of studies needed
 - Minimum studies recommended
 - AF expertise recognized
- Only “known” groundwater contamination site
Sacramento

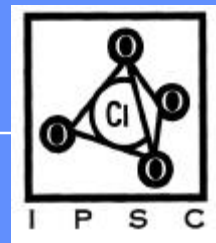
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Post Peer Review Activities

- Seek study funding
- Establish protocol review process
- Texpert team integration (Who?)
 - Internal (DoD)
 - External (PSG, State and Federal Researchers and Regulators)
- New source sites identified

Inter-Agency Perchlorate Steering Committee

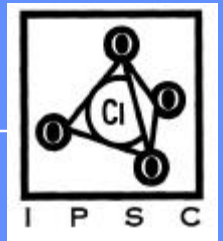


Initial State Regulatory Partnering

21 April 97 Meeting

- Management level action officers and technical support staff
 - California DHS, DTSC, CVRWQB, OHEHA, PSG
- Partnership to serve the public
- Best value for taxpayer dollars
- Set meeting to decide best studies and protocol development

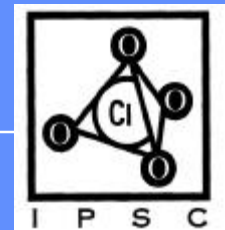
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May 1997 Perchlorate Protocol Review Meeting

- 20/21 May 1997 - Cincinnati
- Expert
 - USAF (AL/HSC/BCA), PSG, DHS, DTSC, OEHHA, EPA Superfund Office, NCEA, Ohio State, U of Cincinnati, Cytec Industries
- Goal?
 - Prioritized List of Reasonable Studies
 - Information Exchange
- California Still the Only “Site”

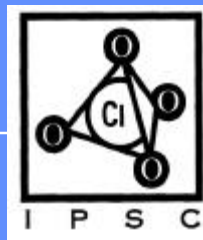
Inter-Agency Perchlorate Steering Committee



Results

- Prioritized list of studies
- Promise to assist in protocol development
- Focus on the goal without regard to cost
- Share final protocol information with the public
- Begin studies as soon as possible
- Partnering to secure needed funding

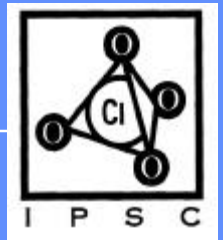
Inter-Agency Perchlorate Steering Committee



Inter Agency Perchlorate Steering Committee (13 Jan 98)

- Purpose
- Sub Committees to address critical areas
- Membership
 - Federal and State Governmental Agencies
 - Tribal Representatives
- Meetings Open to Public
- Coordinate with AWWA-RF
- Public Stakeholder Forum

Inter-Agency Perchlorate Steering Committee



Inter-Agency Perchlorate Steering Committee

-as of 21 May 1998-

Executive Committee

Peter Grevatt (EPA-OSWER)
Kevin Mayer (EPA-IX)
Lt Col Dan Rogers (DoD-USAF)
Annie Jarabek (EPA-NCEA)
Mike Osinski (EPA-OW)

Health Effects/Toxicity

Dave Mattie (DoD-USAF)
Annie Jarabek (EPA-NCEA)

Treatment Technology

Ed Urbansky (EPA-NRMRL)
Wayne Praskins (EPA-IX)
Jim Hurley (DoD-USAF)

Ecological Impacts (T/T)

Mark Sprenger (EPA-OERR)
Cornell Long (DoD-USAF)

Analytical

Captain Dave Tsui (DoD-USAF)
Steve Pia (EPA-NERL)
Howard Okamoto (Cal-DHS)
Sanwat Chaudhuri (Utah DEQ)

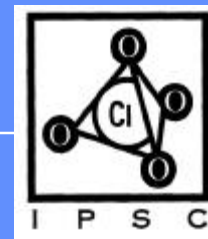
Peer Review

Peter Grevatt (EPA-OSWER)

Forum Composition and Focus

- Bring together the experts in health effects/toxicology, ecological impacts/transport and transformation, analytical methods and treatment technology
- Occurrence information
- Provide information on current initiatives
- Hear public and stakeholder concerns

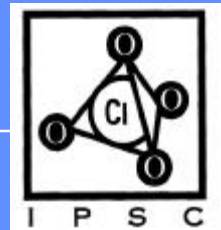
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Where We Are Today?

- Funded toxicology initiatives underway
- Funded treatment initiatives underway
 - AWWA-RF
 - Air Force, Army, NASA
- Partnership initiatives strong
 - Liaison with States of California, Nevada and Utah, Tribal Representation
 - Expect EPA revised RfD end Sept 98 with an external peer review in Oct 98

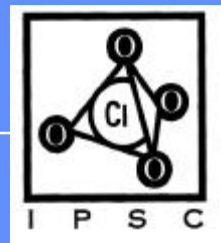
Inter-Agency Perchlorate Steering Committee



Is There a Bottom Line?

- Goal - best scientific information to ensure protection of the nation's drinking water supply
- To get the best scientific information on the toxicology and occurrence of perchlorate to the decision makers and most importantly to the public
- Maintain an integrated approach
- Develop methods and technology as required

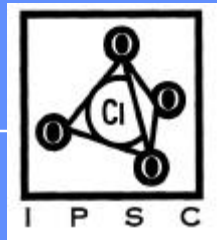
Inter-Agency Perchlorate Steering Committee



Bottom Line (continued)

- There are no limits to the success of this innovative project because of its talented and dedicated team (They don't really care who gets the credit!)

Inter-Agency Perchlorate Steering Committee



Lt Col Dan Rogers

AFMC LO/JAV

Environmental Law Directorate

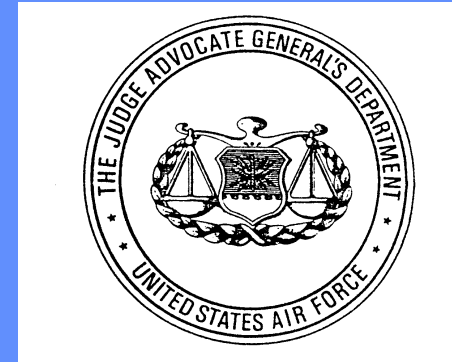
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Inter-Agency Perchlorate Steering Committee

